ORCHIDACEAE NEOTROPICALES. II

De orchidaceis principaliter colombianis notulae.

BY

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During the past fifteen or twenty years, plant exploration in Colombia has been greatly intensified. The number of collections, especially from the high Andean regions of the country, is now very much more comprehensive; and monographic and floristic projects should find in this trend strong impetus and keen encouragement. The very task of routine identification of plant collections often uncovers significant information. Frequently, species or genera turn up which are new either to Colombia or to a given phytogeographic province of the country.

Some of the exploration along frontier regions has resulted in the discovery in Colombia of species known only from neighbouring countries. This is especially so in the case of the orchids which have been collected in eastern or Amazonian Colombia, many of which have been reported hitherto only from Brazil or Perú. There is every reason to believe that the total number of orchids known from Colombia will be markedly increased as recent collections receive critical attention. In 1920, Schlechter (Schlechter, R. in Repert. Sp. Nov. Beih. 7 (1920) listed as known from Colombia 1293 species of orchids.

The following notes, chiefly on Colombian species, are based upon material preserved in the Orchid Herbarium of Oakes Ames in the Botanical Museum of Harvard University. Identification of the specimens discussed has been made by Mr. Charles Schweinfurth, Mr. Gordon de Wolf, Mr. Leslie A. Garay or the writer. The genera, and under them the species, are arranged alphabetically.

AGANISIA Lindley

Aganisia cyanea (Lindl.) Reichb. fil. in Nov. Act. Cur. 35. pt. 2 (1876) 13. t. 4.

BRAZIL: ESTADO DO AMAZONAS: Río Negro, Uaupés (São Gabriel) and vicinity. October 15-19, 1947, *R. E. Schultes et F. Lopez 8943;* Río Uaupés between Ipanoré and the confluence with Rio Negro. November 17, 1947, *R. E. Schultes et J. Murça Pires 9141.*

COLOMBIA: COMISARÍA DEL AMAZONAS: Río Karaparaná, entre las bocas y El Encanto. May 22-28, 1942, *R. E. Schultes 3813.*—COMISARÍA DEL VAUPÉS: Río Kuduyarí. "Flowers pale blue with lip brownish." September 5-8, 1956, *A. S. Barclay et R. E. Schultes 609.*

VENEZUELA: TERRITORIO DEL AMAZONAS: Río Cuao, Río Orinoco. Altitude 125 m. November 25, 1948, *B. Maguire et L. Politi 27393.* Río Pacimoni-Yatua, Casiquiare: Uppermost Río Yatua. Altitude 100-140 m. December 12, 1953, *B. Maguire, J. J. Wurdack et G. S. Bunting 36762;* Río Pacimoni-Yatua, Casiquiare: Uppermost Río Yatua above mouth of Río Yacibo. Altitude 100-140 m. January 30, 1954. *B. Maguire, J. J. Wurdack et G. S. Bunting 37448.*

A common, though never abundant, orchid in the basin of the Río Negro, *Aganisia cyanea* was found by Spruce near Manáos and near Ipanoré on the Río Uaupés. Apparently, collections of it are few, in spite of the fact that its pale bluish flowers are things of rare beauty in the dark Amazonian forests, where colours are seldom striking. The collection *Schultes et Pires 9141* may be considered topotypical, since it was made not far from Ipanoré, and *Schultes 3813* and *Barclay & Schultes 609* extend the known range of the species into Colombia. The recent collections from Venezuela indicate that it is also common in the Territorio del Amazonas of that country.

BRASSAVOLA R. Brown.

Brassavola Martiana Lindl. in Bot. Reg. 22 (1836) sub. t. 1914.

BRAZIL: ESTADO DO AMAZONAS: Upper Río Negro basin, Río Dimití, at base of Serra Dimití, May 12-19, 1948, *R. E. Schultes et F. López 10013.*

Brassavola Martiana, known from Dutch and British Guiana, the Río Negro and Río Branco valleys of the Brazilian Amazon and po-

ssibly southern Venezuela, is associated with the ancient Venezuela-Guiana land-mass. Although it is not uncommon in the Río Negro basin (the type region), the species does not seem to have been frequently collected.

CAMPYLOCENTRUM Bentham

Campylocentrum fasciola (Lindl.) Cogn. in Martius Fl. Bras. 3, pt. 6. (1906) 520. t. 106, fig. 1.

COLOMBIA: COMISARÍA DEL AMAZONAS-VAUPÉS: Río Apaporis, Raudal de Jirijirimo. "No leaves. Flowers small, yellow brown". November 27, 1951, *R. E. Schultes et I. Cabrera 14638.*

Campylocentrum fasciola has, apparently, not hitherto been recorded from Colombia.

CATTLEYA Lindley

Cattleya violacea (HBK). Rolfe in Gard. Chron. 1 (1889) 802.

BRAZIL: ESTADO DO AMAZONAS: Río Negro, Jucabí (at mouth of Río Curicuriari) and vicinity. January 17, 1948, *R. E. Schultes et F. López 9627*, río Curicuriarí, Serra Cujubí and vicinity, January 22-24, 1948, *R. E. Schultes et F. López 9644A.*

COLOMBIA: COMISARÍA DEL VICHADA: Río Vichada, near San José de Ocune. May. 4, 1939, *Oscar Haught 2810.* — COMISARÍA DEL VAUPÉS, confluence of Macaya-Ajaju Rivers, Mount Chiribiquete. Summit 800-1200 feet above forest floor, 1700-2100 feet above sea level. May 15-16, 1943. *R. E. Schultes 5380*; Río Negro, vicinity of Piedra del Cocuí. December 27, 1947, *R. E. Schultes et F. López 9480.*

Cattleya violacea is not listed by Schlechter as an element of the Colombian flora. Nevertheless, it is rather common in the forests of the Amazon and Orinoco basins of eastern Colombia. It is known from Britih Guiana, Brazil and Venezuela.

CENTROPETALUM Lindley.

Centropetalum sanguineum (Lindl.) Kränzl., in Engler Pflanzenr. 4:50 Pseudomonopodiales (1923). 30. t. 3B. 2-f.

COLOMBIA: "Prov. de Pasto, Achupalla. Altitude 2900 m." June 1853, *J. Triana 1371* (Herb. Nac. Col.). DEPARTAMENTO DE CUNDINAMARCA: eastern páramos of Guasca, towards Gachetá. 1921, *Bro. Ariste-Joseph s. n.* Zipaquirá. Altitude 2900 m. May. 28, 1942, *G. Huertas Gon-*

záles s. n. —DEPARTAMENTO DE CALDAS: Cerro Totamá. Altitude 3000-3500 m. September 8-10, 1922, *F. W. Pennell 10449;* DEPARTAMENTO DE SANTANDER, vicinity of Las Vegas. Altitude 2600-3000 m. December 21-23, 1926, *E. P. Killip et A. C. Smith 15889;* COMISARÍA DEL PUTUMAYO: Páramo de Tambillo, noroeste del Valle de Sibundoy. Altitude 2700-2800 m. December 13-14, 1942, *R. E. Schultes et C. E. Smith 3118.*

This beautiful red-flowered species was cited by Schlechter, as *Nasonia sanguinea* Ldl., only from Tolima, the locality of the type material. The collections cited above indicate its wide distribution in the Andes of Colombia. The species is known also from Ecuador

DIACRIUM Bentham.

Diacrium bicornutum (Hook.) Benth. in Journ. Linn. Soc. Bot. 28 (1881) 312.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Negro, El Castilllo (San Felipe). "Epiphyte. Flowers white, the sepals delicately pink-tinged. Lip yellow, spotted brown. Very fragrant". December 12, 1947, *R. E. Schultes et F. López 9335A.*

The genus *Diacrium* seems not hitherto to have been recorded for the flora of Colombia. *Diacrium bicornutum* is known also from Trinidad and Tobago, British Guiana and Venezuela.

DIOTHONAEA Lindley.

Diothonaea heterothonaea Reichb f. et Warsc. in Bonplandia 2. 1854) 112.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Valle de Sibundoy, Sibundoy. Altitude about 2225-2300 m. May 29, 1946, *R. E. Schultes et M. Villarreal 7683.*

Known from the highlands of southern Colombia and Perú, *Diothonaea heterothonaea* is rare in herbarium collections and does not seem to be common in the field. The species was first collected in Colombia by Lehmann near Popayán (Williams, L. O.: Bot. Mus. Leaf. Harvard Univ. 9 (1940) 7).

EPIDENDRUM Linnaeus

Epidendurm caespitosum Barbosa-Rodrigues, Gen. et Sp. Orch. Nov. 1 (1877) 60.

COLOMBIA: COMISARÍA DEL VAUPÉS: Mount Chiribiquete, confluence of Ríos Macaya and Ajaju. Altitude 1700-2100 feet. May 15-16, 1943, *R. E. Schultes 5455.*

The colection cited above is the second of this species from Colombia. The first, *Schultes 5623*, was from the same locality (Schweinfurth, C.: Rev. Acad. Col. Cienc. Exact. Fís. Nat. 6 (1945) 577). *Epidendrum caespitosum*, closely associated with the mountain-mass of the Venezuela-Guiana shield, is known also from Venezuela, British Guiana and Amazonian Brazil. The two Colombian collections extend its known distribution greatly westward.

Epidendrum crassilabium Poepp. et Endl. Nov. Gen. ac Sp. 2 (1838) 1. t. 102.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA: Santandercito. Altitude 1600 m. "Común sobre piedras. Flor blanco-verdosa, con manchas oscuras." June 12, 1946, *L. Uribe U. 1254.*

This widespread tropical American species, frequently reported as *Epidendrum variegatum* Hook., is one of the commonest of the *sub-páramo* orchids in Colombia, but collections of it from the Cordillera Oriental are not many.

Epidendrum dichotomum Presl. Rel. Haenkeanae 1 (1827) 101. 1. Non Lindley Fol. Orch. (1853) Epid. 71, no. 223.
Epidendrum Lindenii Lindl. Bot. Reg. 31 (1845) Misc. 48, no. 59. Non Lindley in Ann. & Mag. Nat. Hist. 12 (1843) 397.
Epidendrum brachyphyllum Lindl. Fol. Orch. (1853) Epid. 72, no. 225.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA: near Usaquén. Altitude 2800-2900 m. March 12, 1939, *E. P. Killip 34045*; Barranca del Río Bogotá, near Salto de Tequendama. Altitude 2380-2500 m. August 20, 1942, *R. E. Schultes, R. Jaramillo M. et G. Gutiérrez V. 4047;* Quebrada Chicó. Altitude 2700-2750 m. May 3, 1946, *R E. Schultes et M. Villarreal 7099.*—DEPARTAMENTO DEL VALLE: Monte Frío, Yanaconas. Altitude 1700-1850 m. February 27-March 1, 1939, *E. P. Killip et H. García-Barriga 33698.*—DEPARTAMENTO DEL TOLIMA: along Quindío Highway, between Cajamarca and summit of divide. Altitude 2570 m. March 27-28, 1939, *E. P. Killip et G. Varela 34636.*—DEPARTAMENTO DE NARIÑO: Las Lajas, near Ipiales. August 7, 1939, *E. K. Balls 7367*; re-

gión of Pedregal, highway between Pasto and Tuquerres, south of Yacuanquer. June 2, 1946, *R. E. Schultes et M. Villarreal 7944.*—COMISARÍA DEL PUTUMAYO: Valle de Sibundoy, Sibundoy. Altitude about 2250 m. December 10-11, 1942, *R. E. Schultes et C. E. Smith 3089*; Valley of Sibundoy, Sibundoy. Altitude 2225-2300 m. May 29, 1946, *R. E. Schultes et M. Villarreal 7686.*—DEPARTAMENTO DEL HUILA; Río Villalobos, vicinity of Río Suazita. Altitude 1400 m. January 1943, *R. E. Schultes et M. Villarreal 5158.*

Common orchid though it be, *Epidendrum dichotomum* was not cited from Colombia by Schlechter, although its synonym *E. Lindenii* was listed from "Magdalena". As the collections cited above indicate, this concep is widespread throughout the highlands of Colombia. A complete synonym of *Epidendrum dichotomum*, until recently better known as *E. brachyphyllum*, may be found in Schweinfurth: Bot. Mus. Leafl. Harvard Univ. 17 (1956) 212.

Epidendrum excisum Lindl. Bot. Reg. (1844) Misc. p. 86.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Valley of Sibundoy, hill north of Valley. Altitude 2220-2270 m. May 28, 1946, *R. E. Schultes et M. Villarreal 7480;* Valley of Sibundoy, Sibundoy. Altitude 2225-2300 m. May. 29, 1946, *R. E. Schultes et M. Villarreal 7677;* Same locality and date. *R. E. Schultes et M. Villarreal 7682.*

Principally a Peruvian and Ecuadorian species, *Epidendrum excisum* was cited from the Departamento del Cauca and from the Pacific coastal area of Nariño by Schlechter. The collections cited above indicate that the species is more widely represented in the southern highlands of Colombia.

Epidendrum frutex Reichb. fil. in Xen. Orch. 1 (1855) 95, t. 37.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA; Río San Cristóbal, near Bogotá. November 14, 1917, *F. W. Pennell 2680.*—DEPARTAMENTO DEL CAUCA; Puracé. Altitude 3330 m. February 1938, *K. von Schneidern 1749.*—DEPARTAMENTO DE CALDAS: Filo Cachirí, west of Quebrada Termales. Altitude 3165 m. November 24, 1944, *H. St. John 20863.*—DEPARTAMENTO DE NARIÑO: west side of Volcán Doña Juana. Altitude 3200-3400 m. December 16, 1944, *J. A. Ewan 16614.*

Epidendrum frutex is rather widespread in the Colombian highlands, notwithstanding the fact that Schlechter did not include this species in his list. It is known also from Venezuela, Ecuador and Perú.

Epidendrum Gastropodium Reichb. fil. in Walpers Ann. Bot. 6 (1861) 405.

COLOMBIA: DEPARTAMENTO DE NARIÑO: south side of Volcán Doña Juana. Altitude 3200 m. December 16, 1944, *J. A. Ewan 16621;* COMISARÍA DEL PUTUMAYO: road between Laguna La Cocha and Páramo del Tábano. Altitude about 2800-3000 m. June 1, 1946, *R. E. Schultes et M. Villarreal 7859;* Laguna de La Cocha, Ciudadela, above lake on road to Sibundoy near Páramo de Bordoncillo. Altitude 2800-3200 m. May 27, 1946, *R. E. Schultes et M. Villarreal 7594.*

Schlechter cited this species, which is especially common in our herbarium collections from Ecuador, as occurring only in the Departamento del Cauca in southern Colombia. The collections cited above appear to represent the second, third and fourth reports from Colombia. According to *Ewan 16621*, it is a "very scarce" species.

Epidendrum grammatoglossum Reichb. fil. in Linnaea 22 (1849) 837.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA: Monte Redondo to Quetame. Altitude 1400-1500 m. "Herb. Perianth greenish-yellow." September 7, 1917, *F. W. Pennell 1852;* Santandercito. Altitude about 1600 m. "Crece sobre las piedras." June 12, 1946, *L. Uribe U. 1253;* DEPARTAMENTO DEL MAGDALENA: Sierra Nevada de Santa Marta, Hacienda Cincinnati. Altitude 1250-1500 m. August 20, 1935, *G. W. Martin 3570.*

Schlechter reported from Colombia several collections of this north Andean species. The recent collections cited above indicate that it is especially widespread in Colombia. It is known also from Venezuela, Ecuador and Perú.

Epidendrum ibaguense HBK. Nov. Gen. et Sp. Pl. 1 (1815) 352.

BRAZIL: ESTADO DO AMAZONAS: Río Negro, Piedra de Cocuí. December 22-23, 1947, *R. E. Schultes et F. López 9456.*

COLOMBIA: COMISARIA DEL AMAZONAS: Río Amazonas, Leticia. September-November 1944. *R. E. Schultes 6162.*

Epidendrum ibaguense has apparently not been recorded from Amazonian Colombia. Although it is frequent in the upper Río Negro of Brazil, it does not seem hitherto to have been reported from that area.

Epidendrum ibaguense HBK. var. **confluens** (Lindl.) C. Schweinf. in Bot. Mus. Leafl. Harvard Univ. 11 (1944) 232.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Mocoa y los alrededores al Norte. Altitude 750-850 m. "Flowers purple." December 3-7, 1942, *R. E. Schultes et C. E. Smith 2073.*

The Inga Indian name of this orchid, which the natives use medicinally in the region, is *i-spa-na-nei-ampĕ*. The rhizomes, together with the leaves of a species of *Monochaetum,* are made into a decoction which is thought to have diuretic properties.

Epidendrum imatophyllum Lindl. Gen. and Sp. Orch. Pl. (1831) 106.

COLOMBIA: COMISARÍA DEL AMAZONAS: Río Loretoyacu. Altitude about 100 m. October 1945, *R. E. Schultes 6729.*

A widespread and very variable species. *Epidendrum imatophyllum* seems not hitherto to have been reported from Amazonian Colombia.

Epidendrum Klotzcheanum Reichb. fil. in Linnaea 22 (1849) 838.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA: Mount Chuscal, west of Zipaquirá, October 22, 1917, *F. W. Pennell 2576;* Páramo de Chipaque. Altitude 3100-3200 m. September 25. 1951. *R. E. Schultes 1050.*

Cited (as *Epidendrum ochriodes* Lindl.) from Colombia by Schlechter only from the Departamento del Norte de Santander, this species, especially common in Venezuela, occurs abundantly in the high páramos of Cundinamrca.

Epidendrum paniculatum R. et P. var. **linearifolium** (Cogn.) C. Schweinf. in Bot. Mus. Leafl. Harvard Univ. 11 (1943) 105.

COLOMBIA: DEPARTAMENTO DEL HUILA: Río Villalobos, region of the confluence of Ríos Villalobos and Cauchos. Altitude 1400 m. January 1943, *R. E. Schultes et M. Villarreal 5243.*

Known from Ecuador and Perú, this small-flowered variety of *Epidendrum paniculatum* may now be reported for the flora of Colombia.

Epidendrum yatapuense Barb.-Rodr. in Vellosia 1. ed. 2 (1891) 123.

Epidendrum laxum Poepp. et Endl. Nov. Gen. ac Sp. 2 (1838), *2; non Swartz,* Prodr. Veg. Ind. Occ. (1788) 125.
Epidendrum macrothyrsis Lehm. et Kränz. in Engler Bot. Jahrb. 26 (1899) 472.

Recently, it was shown that both of the specific concepts known as *Epidendrum yatapuense* and *E. macrothyrsis* were identical with *E. laxum* Poepp. et Endl., and *E. laxum* was taken up as the correct name (Schultes in Bot. Mus. Leafl. Harvard Univ. 17 (1956) 190; Schweinfurth *ibid.* 17 (1956) 214). The binomial *Epidendrum laxum* Poepp. et Endl. is, unfortunately, preempted by *E. laxum* Sw. which refers to a species of *Pleurothallis*. Consequently, the next available name —*Epidendrum yatapuense*— must be taken up for this concept which is known from Trinidad, Peru, Ecuador, Amazonian, Brazil and British Guiana.

EPISTEPHIUM Humboldt, Bonpland et Kunth

Epistephium Duckei Huber, in Bol. Mus. Goeldi 7 (1910) 287.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Vaupés. Sandy savannahs at base of Cerro Circasia. March 7, 1944, *R. E. Schultes 5851A*.

The type of *Epistephium Duckei* was collected by Adolpho Ducke in the vicinity of La Pedrera and is known also from the Cerro del Cocuí on the uppermost Río Negro of Venezuela. The collection cited above appears to be the second from Colombia and to extend the known range of the species far to the north and west into the Río Vaupés basin.

ERIOPSIS Lindley

Eriopsis biloba Lindl. in Bot. Reg. 33 (1847) t. 18.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Ajaju, Cerro de La Campana. "Epiphytic on crags on top; open sunny exposure. Flowers all brown but tip of lip yellow and red-brown spotted. Odour of licorice." June 1-6, 1943, *R. E. Schultes 5560*.

Eriopsis biloba has been known only from Venezuela and Perú. In Venezuela ,it occurs on the remnant mountains of the Venezuela-Guiana land-mass (*Steyermark 60138*) which have a flora related to that of the mountains in Amazonian Colombia. The collection *Schultes 5560* represents apparently the first of this species from Colombia.

Eriopsis Sprucei Reichb. fil. in Walpers Ann. Bot. 6 (1863) 663.

BRAZIL: ESTADO DO AMAZONAS: Río Negro basin, Río Dimití, May 12-19, 1948, *R. E. Schultes et F. López 9947*.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Guainía basin, Río Naquieni, vicinity of Cerro Monachí. June 1948, *R. E. Schultes et F López 10035A.*

Spruce collected the type of *Eriopsis Sprucei* on the "Río Negro", probably along the uppermost course. Therefore, both of the collections cited above may be considered as topotypical. *Eriopsis Sprucei* has hitherto not been cited for the flora of Colombia.

GALEANDRA Lindley

Galendra Devoniana Schomb. et Lindl. Sert. Orch. (1838) t. 37.

BRAZIL: ESTADO DO AMAZONAS: Upper Río Negro basin, Río Dimití. Serra Dimití at base. May 12-19, 1948, *R. E. Schultes et F. López 10022.*

A species of exceptional beauty, *Galendra Devoniana*, the type of which came from Barcellos on the Río Negro, is very rare in the field. The collection cited above is the only specimen represented in the Ames Herbarium.

HABENARIA Willdenow

Habenaria Leprieurii Reichb. fil. var. **heptadactyla** (Reichb. fil.) R. E. Schultes in Bot. Mus. Leafl. Harvard Univ. 17 (1956) 193.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Macaya, Cerro Chiribiquete. July 24, 1943, *R. E. Schultes 5627.*

Habenaria Leprieurii var. *heptadactyla* appears to be associated primarily with the flora of the Venezuela-Guiana land-mass. It is known from Panamá, Venezuela, British Guiana, Amazonian Brazil, Trinidad, and, through the collection cited above, from Colombia.

KOELLENSTEINIA Reichenbach fil.

Koellensteinia graminea (Lind.) Reichb. fil. in Bonplandia (1856) 232.

BRAZIL: ESTADO DO AMAZONAS: Upper Río Negro basin, Río Dimití, Serra Dimití. May 12,19, 1948, *R. E. Schultes et F. López 9911.*

COLOMBIA: COMISARÍAS DEL AMAZONAS Y VAUPÉS: Río Apaporis, Raudal de Jirijirimo (below mouth of Kananarí). Quartzite base. Altitude about 900 feet. General location: lat. 0º5'N, long. 70º40'W. "Epiphyte. Flowers yellow with cross brown lines on sepals." March 15, 1952, *R. E. Schultes et I. Cabrera 15950.*

VENEZUELA: TERRITORIO DEL AMAZONAS: Cerro Duida, August 28-29, 1944, *J. A. Steyermark 58088.*

Known from British Guiana, Venezuela, Colombia and Brazil, this species has a wide distribution, but is apparently not very common in any locality. It has hitherto been known from Colombia through one collection from Cauca. The three collections cited above indicate that *Koellensteinia graminea* is associated with the flora of the ancient Venezuela-Guiana land-mass.

LANIUM Lindley

Lanium microphyllum (Lind.) Benth. in Hooker Icon. Pl. 14 (1881) t. 1334.

Epidendrum microphyllum Lindl. in Hooker Journ. Bot. 3 (1841) 85.

Lanium colombianum Schlecht. in Fedde Repert. Beih. 7 (1920) 155.

Lanium peruvianum Schlecht. in Fedde Repert. Beih. 9 (1921) 97.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Kuduyarí (affluent of Río Vaupés), Yapobodá, quartzite savannah. October 4-6, 1951, *R. E. Schultes et I. Cabrera 14279.*

It is evident from a study of the drawing of Schlechter's concept *Lanium colombianum* (Fedde Repert. Beih. 57 (1929), t. 55, no. 211), that it is easily accommodated within *L. microphyllum*. It is, therefore, here reduced to synonymy.

Schlechter's material came from Antioquia. The collection cited above is, therefore, apparently the second from Colombia. The great distance and geographical difference between the two localities would seem to bespeak a wide distribution of *Lanium microphyllum* in Colombia. The concept is known also from British and Dutch Guiana, Venezuela and Perú.

MAXILLARIA Ruiz et Pavón

Maxillaria alba (Hook) Lindl. Gen. and Sp. Orch. Pl. (1832) 143.

COLOMBIA: INTENDENCIA DEL META: north end of Cordillera La Macarena, near junction of Ríos Güejar and Zanza. Altitude about 500 m. August 20, 1950, *S. G. Smith et J. M. Idrobo 1495.*

Maxillaria alba, known from Guatemala, the Guianas, northern Brazil and Trinidad, can now be recorded for Colombia on the basis of the collection cited above.

Maxillaria stenophylla Reichb. fil. in Bonplandia 2 (1854) 17.

COLOMBIA: DEPARTAMENTO DE BOYACÁ: El Pino, 12 km. northeast of Leiva, south of Arcabuca, Cordillera Oriental. Altitude about 2460 m. 1949, *H. L. Mason 13724.*

This species is apparently as yet unreported from Colombia. It has hitherto been known only from Venezuela.

OCTOMERIA R. Brown

Octomeria brevifolia Cogn. in Martius Fl. Bras. 3, pt. 4 (1896) 643, t. 113, f. 2.

BRAZIL: ESTADO DO AMAZONAS: Río Vaupés, Ipanoré, January, 28-February 9, 1948, *R. E. Schultes et F. López 9670*; Río Uaupés, Taraquá. November 13, 1947, *J. Murça Pires* 1021.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Vaupés, Caño Pacú, March 6, 1944, *R. E. Schultes 5813.*

Octomeria brevifolia has been known from British and Dutch Guianas. The collections cited above extend its known range to Brazil and Colombia.

Octomeria surinamensis H. C. Focke in Tijdschr. Wetensch. 2 (1849) 28.

BRAZIL: ESTADO DO AMAZONAS: Upper Río Negro basin, Río Dimití, Serra Dimití. May 12-19, 1948, *R. E. Schultes et F. López 9958A.*

Known from Dutch and British Guiana and Perú, *Octomeria surinamensis* has apparently not hitherto been definitely reported from Brazil.

ODONTOGLOSSUM Humboldt, Bonpland et Kunth

Odontoglossum aureopurpureum Reichb. fil. in Linnaea 22 (1849) 948.

COLOMBIA: DEPARTAMENTO DE CUNDIMARCA: Páramo de Chipaque. Altitude 3100-3200 m. September 25, 1941, *R. E. Schultes 1043.*

Widespread in Andean regions from Venezuela south to Perú, *Odontoglossum aureopurpureum,* a very showy species with a scandent inflorescence commonly up to fifteen or eighteen feet in length, has not frequently been collected in Colombia. It was originally described from Norte de Santander.

Odontoglossum crispum Lindl. in Ann. and Mag. Nat. Hist. 25. (1845) 256.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Valle de Sibundoy, Porotoyaco. Altitude about 2250 m. December 10, 1942, *R. E. Schultes et C. E. Smith 3151.* . .

Odontoglossum crispum, widespread in the Andes, is one of the most abundant orchids in the higher mountains of the Putumayo.

Odontoglossum cristatum Lindl. in Bentham. Pl. Harweg. (1844) 152.

COLOMBIA: COMISARIA DEL PUTUMAYO: road betwen Laguna de La Cocha and Páramo de Tábano. Altitude about 2800-300 m. June 1, 1946, *R. E. Schultes et M. Villarreal 7856.*

Described originally from Ecuador, *Odontoglossum cristatum* may now be registered for the flora of Colombia.

Odontoglossum ramosissimum Lindl. Fol. Orch. (1852) 16.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Páramo de San Antonio, entre La Laguna de La Cocha y el Valle de Sibundoy. Altitude about 3000-3200 m. February 13, 1942, *R. E. Schultes 3220.*

Odontoglossum ramosissimum, common in the highland areas of Colombia and Ecuador, has not hitherto been recorded from the Putumayo. *Schultes 3220* represents an unusually large flowered specimen.

ONCIDIUM Swartz

Oncidium cocciferum Reichb. fil. et Warsc. in Bonplandia 2 (1854) 101

COLOMBIA: DEPARTAMENTO DEL HUILA: Río Villalobos, confluence of Ríos Villalobos and Cauchos. Altitude 1400 m. January 1943, *R. E. Schultes et M. Villarreal 5210.*

Schlechter cited this rare species from the Departamento del Norte de Santander. Through the collection cited above, its known range is greatly extended to the south.

Oncidium foveatum Lindl. Fol. Orch. (1855) Onc. 52.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Sibundoy. Altitude about 2250 m. December 15, 1942, *R. E. Schultes et C. E. Smith 3140.*

Described from Perú, *Oncidium foveatum* has apparently not hitherto been reported for the Colombian flora.

Oncidium pyramidale Lindl. in Ann. and Mag. Nat. Hist. 15 (1845) 384.

COLOMBIA: DEPARTAMENTO DE NARIÑO: Volcán de Pasto. Altitude 2400-2800 m. (No date) *F. C. Lehmann 6277*; DEPARTAMENTO DE CUNDIMARCA: Páramo de Guasca. Altitude 2850-3340 m. January 22, 1942, *R. E. Schultes et R Jaramillo M. 3211X.*

This rare species was reported by Schlechter only from the Departamento del Cauca.

Oncidium trulla Reichb. fil. et Warsc. in Bonplandia 2 (1854) 101.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Valley of Sibundoy, Sibundoy. Altitude 2225-2300 m. May 29, 1946, *R. E. Schultes et M. Villarreal 7697.*

Oncidium trulla, recorded by Schlechter from the Departamento del Norte de Santander, is now reported from southern Colombia, very near the Ecuadorean frontier. It is known also from Perú.

PACHYPHYLLUM Humboldt, Bonpland et Kunth

Pachyphyllum squarrosum Lindl. in Ann. and Mag. Nat. Hist. 15 (1845) 107.

COLOMBIA: DEPARTAMENTO DE CALDAS: Pinares, above Salento. August 2-10, 1922, *F. W. Pennell 9275*; Summit to Cucarronera, new Quindío Trail. August 14, 1922, *E. P. Killip 9786*; Páramo de Chilí, *La* Vega. Altitude 3690 m. December 11, 1944, *H. St. John 20894*.

Schlechter cited *Pachyphyllum squarrosum* only from the Departamento del Cauca. The collections cited above, all from Caldas, extend the known range of the species northward in Colombia. It has apparently not been reported from neighbouring countries.

PERISTERIA Hooker

Peristeria guttata Knowles et Westcott Flor. Cab. 2 (1838) t. 70.

COLOMBIA: COMISARÍA DEL AMAZONAS: Río Amazonas, Leticia. Altitude about 100 m. September-November, *1944, R. E. Schultes 6198B.*

Schultes 6198B establishes the occurrence of this rare Guianan species in Colombia. Since Leticia is situated at the Brazilian and Peruvian frontier of Colombia, *Peristeria guttata* should be expected to occur likewise in both of these neighbouring countries.

PHRAGMIPEDIUM Rolfe

Phragmipedium Schlimii (Reichb. fil.) Rolfe in Orch. Rev. 4 (1896) 332.

COLOMBIA: COMISARÍA DEL PUTUMAYO: Cerro de Portachuelo, entre Mocoa y Sachamates. Altitude about 1600-2000 m. December 9, 1942, *R. E. Schultes et C. E. Smith 3050.*

This beautiful orchid was cited by Schlechter from the Departamentos del Norte de Santander and Antioquia and from the Putumayo in Colombia. It seems not to be common in the field, and collections of it are scarce in our herbaria. The species usually is incorrectly referred to as *Phragmopedilum Schlimii.*

PITYPHYLLUM Schlechter

Pityphyllum Amesianum Schlecht. in Fedde Rep. Beih. 27 (1924) 86.

COLOMBIA: COMISARÍA DEL VAUPÉS: Río Kuduyarí, Yapobodá, quartzite savannah. Altitude about 800-900 feet. April 1953, *R. E. Schultes et I. Cabrera 20070.*

The type and, so far as I have been able to ascertain, the only other collection of this morphologically curious orchid was made in 1921 from the Río Pasto area in Nariño, Colombia, at an altitude of 2300 meter. The extension of geographical range to such a distant point of the Amazon basin is no less remarkable than the extraordinary extension of altitudinal range.

PLEUROTHALLIS R. Brown

Pleurothallis orbicularis (Lindl.) Lindl. in Bot. Reg. 28 (1842) Misc. 79

COLOMBIA: DEPARTAMENTO DEL CHOCÓ: Corcovado Region, upper Río San Juan, ridge along Yaracuí Valley. Altitude 200-275 m. April 24-25, 1939, *E. P. Killip 35269.*

Pleurothallis orbicularis, known from Grenada, Trinidad and British Guiana, seems not to have been reported from Colombia. Its occurrence along the Pacific Coast of Colombia, so far and phytogeographycally isolated from its other known stations, is indeed worthy of note.

Pleurothallis Ospinae R. E. Schultes, nom. nov.

Restrepia antennifera HBK. Nov. Gen. et Sp. 1 (1816) 367, t. 9.

COLOMBIA: CUNDINAMARCA: Municipio de Soacha, Río Bogotá. El Charquito arriba del Salto. September 30, 1956, *M. Ospina-Hernández 1.*

Since the generic concept *Restrepia* can easily be accommodated in *Pleurothallis*, it becomes necessary to transfer *Restrepia antennifera* to *Pleurothallis*. The binominal *Pleurothallis antennifera* Lindley Fol. Orch. (1859) Pleur. 30, no. 178, refers to a different plant and is therefore preempted for the concept under discussion. *Pleurothallis Ospinae* is named in honour of Doña Bertha Hernández de Ospina Pérez, one of the most enthusiatic orchidophiles of Colombia.

Pleurothallis Ospinae occurs in Ecuador, Colombia and Venezuela.

POGONIA Jussieu

Pogonia rosea (Lindl.) Reichb. fil. Xen. Orch. 2 (1865) 89.

COLOMBIA: DEPARTAMENTO DEL VALLE: Córdoba, February 17, 1939, *E. P. Killip et H. García-Barriga 33375*; 10-15 km. east of Buenaventura, April 12, 1939, *E. P. Killip 34913.*—COMISARÍA DEL VAUPÉS: Río Vaupés, Raudal de Yuruparí, April 12, 1953, *R. E. Schultes et I. Cabrera 19001.*

Pogonia rosea, a widespread though apparently never abundat species in northern South America, was cited by Schlechter from "Magdalena", Colombia. The collections cited above indicate its extensive distribution in the Republic. It is known also from Perú, northern Brazil, British Guiana and Trinidad.

POLYCYCNIS Reichenbach fil.

Polycycnis vittata Reichb. fil. in Walpers Ann. Bot. 6 (1863) 618.

BRAZIL: ESTADO DO AMAZONAS: Upper Río Negro basin, Río Gié, Cachoeira Cumatí, November 29-December 7, 1947, *R. E. Schultes et F. López 9215*; Río Negro, Serrinha, opposite the mouth of the Río Issana, January 3-6, 1948, *R. E. Schultes et F. López 9582.*

COLOMBIA: COMISARÍA DEL AMAZONAS: Río Loretoyacu, November 10, 1946, *G. A. Black et R. E. Schultes 46324.*— COMISARÍA DEL VAUPÉS:

Río Negro, El Castillo near San Felipe. December 12, 1947, *R. E. Schultes et F. López 9339A.*

Polycycnis vittata has not hitherto been reported from Colombia nor from the western part of he Brazilian Amazon. It has been known from the Guianas, Amazonian Perú, and the eastern Amazon of Brazil.

RODRIGUEZIA Ruiz et Pavón

Rodriguezia refracta (Lindl.) Reichb. fil. in Bonplandia. 2 (1854) 90.

COLOMBIA: CUNDINAMARCA: Pacho, vereda de las Huertas. Altitude about 1600 m. "Flor blanca. Epífita sobre *Crescentia Cujete.*" May 1947, *L. Uribe U. 1582.*

The type of *Rodriguezia refracta* was collected from Santa Marta, near the Caribbean coast of Colombia. The collection *Uribe 1582* indicates that it has a rather wide distribution, ranging to the Cordillera Central.

Rodriguezia secunda HBK. Nov. Gen. et Sp. 1 (1816) 337. t. 92.

COLOMBIA: DEPARTAMENTO DEL VALLE: Las Juntas del Dagua. Altitude 300-1000 m. July-October, ? *F. C. Lehmann 8084*; Cisneros, Dagua Valley. "Purchased at railroad station but said to be common in the adjacent forest." May 21, 1944, *E. P. Killip et J. Cuatrecasas 39170.*—DEPARTAMENTO DE CUNDINAMARCA: Paime *Ariste-Joseph 1087.*—DEPARTAMENTO DE ANTIOQUIA: 1937, *O. Haught 2157*; Urabá, Dabeiba, en la Quebrada Carrá. Altitude 400 m. January 1947, *L. Uribe U. 1528.*

Schlechter listed *Rodriguezia secunda* only from Magdalena and Cauca. The collections cited above indicate that this widespread tropical American species has an extensive range in Colombian territory.

SPIRANTHES L. C. Richard

Spiranthes vaginata "Lindl." ex Jackson in Ind. Kew. (1895) 967.

COLOMBIA: DEPARTAMENTO DE CUNDINAMARCA: Páramo de Guasca, July 1919, *Ariste-Joseph A 399;* Macizo de Bogotá, Cerro entre Quebrada de las Delicias y la de Las Ninfas. Páramo. Altitude 3000-3180 m. June 25, 1939, *J. Cuatrecasas 5633*; Páramo de Guasca. Altitude 2850-3340 m. January 22, 1942, *R. E. Schultes et R. Jaramillo M. 4060.*—DEPARTAMENTO DE SANTANDER DEL NORTE: Cordillera Oriental. Páramo de Tama, arriba de la Cueva. Altitude 3100-3200 m. October 27, 1941, *J. Cuatrecasas, R. E. Schultes et C. E. Smith 12605.*

Though not uncommon in the *páramos* of the northern Andes, *Spiranthes vaginata* seems not to have been reported from Colombia.

STANHOPEA Frost ex Hooker

Stanhopea Randii Rolfe, in Kew Bull. (1894) 363.

COLOMBIA: COMISARÍA DEL AMAZONAS: Loretoyacu River. Altitude about 100 m. September-November 1944, *R. E. Schultes 6330.*

Known from a few collections from Amazonian Brazil and Perú, *Stanhopea Randii* has apparently not hitherto been reported from Colombia. It is poorly represented in our herbaria and seems to be rare in the field. The flower of this species has a pronounced aroma of wintergreen.

STELIS Swartz

Stelis furfuracea Lehm. et. Kränzl. in Engler Jahrb. 23 (1899) 447.

COLOMBIA: DEPARTAMENTO DEL NORTE DE SANTANDER: Valley of Río Chitagá. Altitude 3140-3500 m. September 24, 1944, *H. St. John 20782.*

Stelis furfuracea was cited by Schlechter from the Departamento del Cauca. It is a very rare species. This collection from northern Colombia indicates that it is wide-ranging in the Republic, even though it has apparently not been reported from neighbouring countries.

XYLOBIUM Lindley

Xylobium squalens (Lindl.) Lindl. var. **gracile** (Schltr.) C. Schweinf. in Bot. Mus. Leafl. Harvard Univ. 11 (1944) 198.

COLOMBIA: DEPARTAMENTO DEL VALLE: Cordillera Occidental, La Cumbre. Altitude 1800-2100 m. May. 14-19, 1922, *E. P. Killip 5581.*— COMISARÍA DEL PUTUMAYO: Páramo de Tambillo, noroeste del Valle de Sibundoy. Altitude 2700-2800 m. December 13-14, 1942, *R. E. Schultes et C. E. Smith 3094.*

Apparently, this orchid has not yet been reported from Colombia, either as *Xylobium squalens* var. *gracile* or as *X. gracile* Schltr.